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ABSTRACT

A study was conducted to determine whether graduate teaching assistants in speech communication were aware of the affective components of their classroom behavior and of the student responses to them, and whether the instructors' awareness of the affective dimensions of instruction related to the student evaluative responses. Subjects were 640 students enrolled in 30 sections of a basic communication course taught by 18 instructors. During the last week of a semester, the students were administered the Index of Teachers' Affective Communication (ITAC), along with the objective teacher evaluation instrument traditionally used by the whiversity. In separate circumstances, the teaching assistant in each course. section was asked to examine the ITAC and predict what the mean stydent response would be for each of the items on the measure. The results suggésted that the teaching assistants had poor sensitivity as to how they were perceived by their students. While most instructors scored well on the ITAC according to their students, many were unable to predict their scores. The results support the generalized use of the ITAC as an effective evaluation instrument of *classroom communication. (FL)

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THE EVALUATION AND PREDICTION OF AFFECTIVE RESPONSE
TO GRADUATE TEACHING ASSISTANTS' CLASSROOM
COMMUNICATION

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THE EVALUATION AND PREDICTION OF AFFECTIVE RESPONSE TO GRADUATE TEACHING ASSISTANTS! CLASSROOM COMMUNICATION

One of the ironies of communication education is that while many departments depend upon the basic course as the "bread and butter" base of departmental credit hour output; they often consign instruction to a staff representing the lowest levels of training and experience — the Graduate Teaching Assistants. While the academic and practical problems that produce this situation vary, eventually concerns are admitted about the quality of instruction delivered in such programs, particularly if the programs are very large. These concerns then give rise to a variety of evaluation and training techniques which attempt to assess and then improve the teaching performance of the GTA's.

Many current assessment techniques rely largely on student evaluations of teaching performance and emphasize supposedly "objective" aspects of teacher performance. They tend to stress readily observable dimensions such as apparent organization of information, demonstration of knowledge of material, and specificity of student task descriptions. Most such instruments clearly attempt to avoid areas having to do with the personal liking or disliking of instructor and student.

Critics denigrate student evaluations of teaching as popularity contests, but we may at this point offer the opposite side of the coin and ask whether "popularity" or liking might not be a significant and true component of instructional effectiveness. Substantial research supports the notion that positive classroom affective climates are related to increased learning, and an evaluation system that ignores the affective components of classroom transactions may be at least as misleading as one which attends only to personal liking. Further, a lack of the instructors' or GTAs' awareness of their affective roles in the classroom may result in negative affective conditions which inhibit student performance.

The study reported here provides an initial step in dealing with this problem. While investigative in nature, this project considers two preliminary questions: (1) are instructors (in this case GTA's) aware of the affective components of their classroom behavior and student responses to them; and (2) is the instructor's awareness of the affective dimensions of instruction related to the student evaluative responses the instructor receives?

AFFECTIVE COMMUNICATION AND STUDENT EVALUATIONS

A popular principle about communication behavior is that it's not what you say but how you say it." Many of us can remember times when a change in the manner of communicating would have yielded different consequences. The phrasing of a statement, the nonverbal attributes of a message — these and other factors may affect the acceptability or general responsiveness to a message. The classroom setting is no different. The ability of a teacher to determine and control affective communication within the classroom may be essential to good pedagogical practices.

In 1964, Krathwohl, Bloom & Masia published their <u>Taxonomy of Educational Objectives</u>: <u>Handbook II</u>, <u>the Affective Domain</u>, setting forth a discussion of the affective aspects of instructional goals. Recognizing a concern for affective learning, Krathwohl <u>et al</u>. categorized components of the affective domain and their taxonomy provides teachers with the framework necessary to establish educational objectives which concern the "liking" or attitudes of students towards various concepts, principles or skills. Clearly the affective objects might also include the teacher, or other students.

Recent work by Hurst (1980) has further emphasized the significant role which the affective environment plays in the learning process. Hurst suggests that affective learning may constitute the first level of a hierarchy. That is, students' affective orientations "acted as a stimulus for certain cognitive achievements" (p. 301). A student's "willingness to receive" instruction precedes cognitive accomplishements and can act as a gate-keeper to other learning. Therefore, teachers must consider both cognitive and affective perspectives for any given educational goal. Hurst's work is consistent with the earlier work of Andrews (1978) who found that the cognitive and affective skills of a teacher seem to "mesh" together whenever confronting the problems of teaching.

The affective as well as the cognitive qualities of a teacher are apparent to most students (Marques, Lane and Dorfman, 1979; Bousfield, 1940) and should be considered carefully (Ayers, Rohr and Bilbrey, 1980). The affective communication skills a teacher demonstrates may impact on several aspects of teacher-student relations. For example, teachers who demonstrate positive affective communication skills, such as dynamic and sociable behavior, may be seen as more competent than those who do not (Samuels and Griffore, 1980; Sherman and Blackburn, 1975), Even teachers with a weakness in the subject matter have been judged favorably by students because of the teacher's successful affective communication skills (Naftulin, Ware and Donnelly, 1973). Further, Gage (1963) found that student ratings of teaching effectiveness depend as much on the personality of the teacher as on educational content.

1.

The affective qualities manifest in a teacher's communication behavior also have been found to produce significant effects on student learning (Crawford, Brophy, Evertson and Coulter, 1977). In classrooms where teachers communicated in such a way that students felt they had control over their own behavior, Fiedler (1975) found that student achievement levels were greater than in the alternative conditions. Hurt, Scott and McCroskey (1978, p. 173) contend that students who perceive that their teacher likes them, develop more positive self-concepts than students who hold opposite perceptions, and further argue that a supportive climate in the classroom promotes fuller development of a student's self-esteem and personal growth. Presumably, the pedagogical implication is that positive self-concepts promote better learning.

However important the affective aspects of a teacher's communication behavior may be, no progress towards the development of training or improvement in the area may be made unless we feel some confidence that affective behavior can be measured, or that teachers can accurately assess their own affective communication patterns. Those concerns will be the focus of the next section of this paper.

MEASURING AND PREDICTING AFFECTIVE COMMUNICATION RESPONSES

Some recent approaches to the development of instruments to measure student valuing of their instructors seem to indicate movement toward an assessment of teachers' affective communication. McLaughlin, Erickson and Ellison (1979) indicated that "student evaluation measures... reflect a growing recognition of the affective components of the teacher's classroom communication: virtually every factor analytic study of the dimensions of instructional effectiveness published in the last five years has uncovered an affective factor or set of subscales (p. 14)." Washington (1979) reported that specific affective variables such as interpersonal relations with students, classroom atmosphere, praise and criticism and teacher-pupil fit, were related to student ratings of teacher effectiveness.

In an attempt to assess the affective behaviors of teachers within the classroom setting, McLaughlin et al. developed a fourteen item instrument, the Index of Teachers' Affective Communication (ITAC), a shortened version of an earlier affective communication instrument. From an initial pool of 540 items, the investigators produced a fifty item scale and then a short-form ITAC of fourteen items. The fourteen items represent twelve independent components of affective teacher behavior: (1) nonspecific criticism; (2) rejection of student thinking; (3) rejection of student feeling-expression; (4) rejection of student-initiated goal-setting and/or procedures; (5) rejection of student behavior; (6) justification of self and/or authority; (7) non-specific praise; (8) acceptance of student thinking; (9) acceptance of students' expression of feel-

ings; (10) acceptance of student-initiated goal-setting and/or procedures; (11) acceptance of student behavior; (12) acceptance of student evaluation of self and/or authority. In McLaughlin's et al. studies, reliability coefficients for the ITAC were found to be .95 and .94 in two studies, and validity support was indicated by the ITAC's high correlation (.80) with mean ratings on the Doyle Student Evaluation of Instruction measure. High ITAC scores also correlated well with observations of nondirective talk, and ratio of praise and criticism statements on the Amidon and Flanders classroom communication observation instrument. (See Appendix A for a copy of the ITAC

short fam.)

The ability of instructors to self-evaluate their teaching abilities has also received attention in recent research. Blackburn and Lark (1975) examined the correlation between teacher self-evaluation and student evaluation results and found only a .19 correlation between the two. Centra (1973) asked faculty to select a single course in which to evaluate themselves and to be evaluated by their students at midsemester; analysis of the self-evaluation revealed only a modest correlation of .21 for seventeen evaluative items with student responses. Braskamp, Caulley and Costin (1979) found that self-evaluation indicated a "lack of favorableness of self-over student ratings." However, Doyle and Webber (1978) and Doyle and Crichton (1978) found good correlations between students' ratings and teachers' self-evaluation and noted that those instructors who describe themselves as better teachers also report success in getting students interested in the material and say that they themselves enjoy teaching and like the course material. While we find some dispute among the various findings, the preponderance of data support the notion that teachers may not be particularly accurate in predicting how they may be evaluated by their students.

Two areas of previous research, then, lead us to the question we will consider here. Given that some doubt exists that teachers may be at all accurate in their intuitive assessments of how students view them, can some relationship be determined between an individual teacher's sensitivity to student responses and the nature of the actual evaluations students make of teacher affective communication behavior? More specifically, we can address two discrete questions:

(1) are instructors (in this case GTA's) awafe of the affective components of their classroom behaviors and students' responses to them; and (2) is the level of instructor awareness related to the students' actual evaluative responses to the teacher?

A third question of a subord nate level addresses additional testing of the ITAC instrument itself. (3) Will ITAC items demonstrate reliability and unidimensionality in this examination of student responses to GTA's teaching behavior?

Subjects involved in the study included students and graduate teaching assistants in a basic communication course at a moderate-sized comprehensive university. Six hundred and forty students responded by assessing the classroom communication behaviors of eighteen GTA's teaching thirty course sections. Students participating in the evaluations represented a wide range of academic majors and most were in their first or second year of college study. Graduate teaching assistants included both those working towards masters and doctoral degrees and represented a range of 0 - three years of college teaching experience.

In the last week of a semester, the ITAC was administered to the students along with the objective teacher evaluation instrument employed at that university. Both evaluation instruments were administered and collected by an individual other than the actual instructor of each course section. Subjects were assured that the results of the measurements would remain unknown to their instructors until after the final grades were turned in. Additionally, no student identifying information was placed on either evaluation form.

In separate circumstances the GTA in each course section was asked to examine the ITAC and "predict" what the mean student response would be for each of the fourteen items. An identifying code was assigned to these responses by an independent coder in order to maintain the anonymity of the GTA's.

MEASUREMENT COMPARISONS AND RESULTS

In order to answer the first question, actual student responses on a measure of teacher affective communication (ITAC) were compared to instructor predictions of their students' responses. First a grand correlation of all students' responses to all instructor predictions was computed (Nie, Hull, Jenkins, Steinbrenner & Bent, 1975). Next means were computed for students' responses on each of the fourteen ITAC items, for each of the 30 sections. These were then correlated with the instructors' predictions of students' responses for each item (See Table 1).

In the first cases, the grand correlation reached r = .3909 (p. .0001) and suggests that overall these GTA's were not good predictors of students' responses to their classroom affective communication. In the second comparison, thirty-seven percent (11) of the instructors produced predictions that correlated at > .50 with their students' responses (see Table 2). In fact, one half of all section predictions correlated below .35. Generally, GTA's do not demonstrate the accuracy of prediction of student responses one might expect were they aware of their classroom affective behaviors and students' responses to them.

The second research question concerning the relationship between instructor-prediction accuracy and student perception of instructor's affective communication behavior was answered by first of all determining "good" instructor predictors of student responses (those whose predictions of student responses correlated with actual responses at a level higher than the median correlation of all instructors of .3554), and "high" student evaluations of instructors (those scores for each ITAC item below the median score of 1.971 on the rating scale. The ITAC scale ranges from 1-7 with 1 as the most positive response). The student responses were tested for unidimensionality by factor analytic procedures and found satisfactory so the fourteen item scores were summed and the mean scores for all students within each section were computed. Comparisons of the instructor/ predictor data and student evaluation data revealed that of the fifteen "good" predictor instructors, only forty percent were rated above the median by their students. Conversely, sixty percent of the good predictors were rated below the median. Of the fifteen instructors who were "poor" predictors of student responses, sixty percent were rated above the median on ITAC scores and forty percent rated below the median. Generally, the better predictors of student responses were evaluated lower on the ITAC scale than their poor predictor counterparts; those instructors less effective in predicting their students' perceptions of their affective communication behavior scored higher onthe ITAC scale than those who predict well. These results are quite surprising and contrary to common sense expectation.

We should point out that when we refer to those instructors perceived as poor by student responses, we are referring to those with ITAC scores above the median on the ITAC 1 - 7 rating scale. (On the ITAC scores, a one represents the most positive evaluation, a seven is the most negative response. Consequently, instructors evaluated below the 1.971 median are more favored by their students than those scoring above the median.) Actually, most GTA's performed rather well on the ITAC. All but two inatructor-sections were scored below 3.0 indicating -good affective communidation behavior within the classroom. Further, it was interesting to us to determine how many instructors rated themselves better or worse than the student mean responses for that section. Fiftyseven percent (17) of the instructors rated their own affective behavior worse than their students did, and forty-three percent (13) rated themselves more positively than did their students (see Table 3). Apparently a majority of GTA's are pessimistic in their predictions of student ... perceptions of their classroom affective communication behavior.

Regarding the third research question concerning the reliability and unidimensionality of the ITAC instrument, a principle components solution followed by varimax rotation was performed on the student responses on the ITAC (see Nie, et al.). Only one factor was extracted with an Eigenvalue unity; it accounted for fifty-six percent of the total variance. Item loadings ranged from .53 to .79 (see Table 4). The extraction of only one factor supports previous research and the determined unidimensionality of the scale application replicates the McLaughlin et al. studies. The reliability was sufficiently established with an alpha level of .93.

DISCUSSION

The data collected in this study allow some interesting inferences. One issue addressed by this study concerns the predictive abilities of GTA's concerning their students' responses on the ITAC scale. The results were consistent with some of the previous research which suggested that instructors apparently have poor sensitivity as to how they are perceived by their own students -- at least regarding teacher affective communication. While most GTA's scored very well on the ITAC instrument according to their students, many were unable to predict it (student response/instructor prediction r = .36). One reason for this result might be a response bias on the part of the GTA's. A general modesty value (false or real) many inhibit more optimistic responses by the instructors, particularly if they think their responses will be examined by others. Even though the study design included procedures for guarding the anonymity of instructor responses, more optimistic assessments may have been inhibited. The result of this would be a depressed level of self-assessed means, and consequent low correlations with student actual assessments. Seventeen of the thirty GTA self assessments were more negative than the students' evaluations of their instructors. Additional error may be due to the "imprecision" of the GTA's responses. The instructors predicted the mean of the class evaluation and indicated it by. marking the number closest to the predicted mean on a scale of 1 - 7. Of course the actual computed means were four digit numbers and attempts to correlate them with whole numbers may have suppressed the strength . of the relationship. However, this is unlikely to have had a drastic effect on the results as reported.

In addition to the grand correlation between student responses and instructor prediction, an analysis of each section was conducted and similar results were produced. Fewer than half of the participating GTA's were able to predict with reasonable accuracy (r = .50) how they were affectively perceived by their students. In fact, many GTA's predicted rather poorly. The implications of this observation are interesting. How can young, inexperienced GTA's improve their classroom performance if they have up accurate perception of how their students perceive them? Evidently, many of our instructors do not or cannot

accurately read the verbal and non-verbal feedback provided by students in the course of classroom interactions — or students mask and with-hold feedback for any variety of reasons. The question of whether such perception/predictions are improvable needs to be answered before approaches may be taken to develop training programs which attempt to modify the affective communication behavior of any teacher.

We were also interested in determining whether the "good" predictor GTA's were also those individuals with the best ITAC scores. The results gained suggest otherwise. The better predicting GTA's were those with poorer ITAC scores. In fact, some of the best predictions were by GTA's with notably low rating affective scores. Several reasons not investigated in this study may account for this condition. For example, GTA's who rate at the extreme ends of a high/low affective scale may receive less mixed or ambiguous feedback from their students than those whose ITAC ratings are less extreme. However, if this were true, one would expect that very positively rated instructors would be as good predictors as very negatively rated instructors; the data did not support this supposition, though again high process might have been in-hibited because of the modesty valuing of the instructor. Also, students may provide less ambiguous responses to those instructors whom they see as cold, uncaring or unresponsive (negative affective communication). In short, students may try harder to affect the behavior of someone whom they consider an insensitive instructor. But if, as the results suggest, low affective instructors are more accurate in their predictions of the responses of their students, one can only wonder why they don't modify their behavior accordingly. If they are unclear as to how they can change their approaches, then that clearly becomes a major objective of any proposed training or improvement program.

Concerning the reliability of the ITAC as an instrument for assessing a teacher's affective communication behavior, this study's results support the generalized use of the ITAC as an effective evaluation instrument of classroom communication by graduate teaching assistants. The emergence of only one factor supports the presumption of unidimensionality of the instrument and the products of a reliable alpha coefficient in a homogenous group (GTA's) coincides with the results obtained in previous studies. With this confirmation, instructors may confidently assume that summing the scorestreported by students on the ITAC will provide a meaningful assessment of their affective classroom communication. Contrary to the very general assessments provided by many other approaches, the ITAC can identify and locate very specific behavioral areas in the teacher's performance that are effective or that merit improvement.

This study was an investigation involving affective components of a GTA's communicative behavior in the classroom. Several interesting results emerged, but the study is not without some admitted weaknesses.

First, the sample size of GTA's was small. While thirty instructorsections were observed, actually only eighteen different GTA's were' involved, since some taught more than one of the observed sections. This small population may provide biased data and future research should replicate the basic study design with more instructors in a wider variety of circumstances. Both the study validity and the generalizability of its results would be enhanced by such an expansion. Second, since regular faculty were not included in the study, the prediction fnaccuracies discovered may be a function of the limited experiential background of the GTA's. More extensive experience may increase both sensitivity to student feedback and accuracy in evaluating that feedback. Additionally, other relevant independent variables such as: age position, and types of classes could be considered as they affect affective communication skills of instructors. A comparison of the faculty ITAC scores with GTA scores might suggest other relevant variables associated with affective communication. Similarly, a correlation between the usual "objective" teacher evaluation scores and ITAC responses would be interesting. If a strong positive correlation appeared between the two measures, we might less fear the "popularity contest" threat many now resent in teacher evaluation techniques. Clearly, "liking" as a result of positive affective communication behavior would be a sought-after : goal of most effective teachers.

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TABLE 1

Course-wide Means of Student Responses and Instructor Predictions of Fourteen Items on ITAC

	` , <u>,</u>				•
Item	•		Student \overline{X}	· .	Instructor X
1	4		2:364	• •	`3.100
2	,		1.648	•	1.833
3	•		1.934	ø .	,1.900
- 4	•	•	· 2.199	. '	- 2.733 _
5	• • •	-	2.470		2.867
6	,	Line -	2.388		3.033
7	H ,	,	2:043	,	1.900
. 8	, %	* .	1.950	-	" 27.533 -
9,	.		. 2.315		3.200
10			1.886		2.5
11,	n		2.538	•	2.800
	• •		2.205	• .	· / 2.267 [*]
13		, •	2.614		3.133
14		₩ F	1.560		1.900
,			•	*	7

Correlation Coefficients of Predicted Scores and Student \overline{X} for Sections

TABLE 2

Section		•	<u>r</u>		Student X	
* ·1	·		.0813	· •	1.765	4
2		•	.1761		1.865	V
3	, !	•	.2817	,	• 2.036	5
. 4	•	, .	.5461		2.353	•
5 -	•	•	.6425		1.663	
6	\. ,		.6466		1.971-	median
7		,	.3943		.1.714	,
8 .	L'A	-	.6934	1	1.646	
.9	j	•	.5485		1.697	
. 10	•	•	. 4795		2.026	*
1,1	•		.2474		2.019	* .
12	٠.		.7097	• •	2.877	
12	,		.1664		· 1.794	
14			.1778	•	1.745	, · ·
15	**************************************	-	.3029	•	2.199	:
, 1 6			.5971	•	2.763	
17	4, /		.3113) `	· * 2.378·	
18	,. \		-3554-	median [°]	. 2.821	f
19	•	• ~	.1756		. 1.714	••
. 20	•		.0202		1.693	*1 A
21		_	.0684	v	_₹ 1.987	
_22	*		.1412		1.527	
23 .		. ' ·	.4952	, ,	2.479	-
24			.6427	٠, ،	2.160	,
25		,	.2311	•	1.446	s
26		-	.1055	ı	1.568	
27	•		.5328		4.280	
28	•	1	.5252		4.241	•
29	• ′		.6179		1:804	•
<u>3</u> 0			.2271	,	2.094	
			•			.•

Student \overline{X} , Instructor \overline{X} , Rating Result

(W = Instructor rates self worse than students do; B = Instructor rates self better than students do.)

Section -	Student X	Instrucțor X	Rating Result
* 1	1.765	3.429	Tr W
2	1.865	3.429	· · · · · · · · · · · · · · · · · · ·
* 3	2.036	4.214	<u>.</u> w ,
. 4	2.353	5.214	W
. 5	1.663	1.643	В.
6	± √ 971 ·	1.643	В
. 7	1/714	2.071	. W
. 8	1.646	2.857	. w
9	1.697	, 2.500	~ W .
F 10	2.026	2.429	, W ,
11	2.019	4.000	`}∲ W ∘
12 .	2.877	4.071.	·W
13	1.794	1.071	В .
14	1.745	1.071	, "в ,
15	2.199	3.000	**W
. 16	2.763	3.000	` W
. 17	2.378 es	2.000	В
- 18	2.821	.2.000	1 1 1 1
19	1.714	1.357,	В .
20	1.693	1.357	, <u>B</u>
· 21	1.987	1.714	* B
22	1.527	2.143	₩ W
23	2.479	1.643	В
24 • - `	2.160	2.714	A
25	1.446	2.429	W - *
26	1.568	2.786	· W
27 .	4.280 "	3.929	, (В
28	4,241	3.071	B .
29	1.804	1.929	. W
. 30	2.094	. 1 ₇₈₆	, B

TABLE 4

Index of Teachers' Affective Communication: Fourteen Item Short Form

		Factor Load	ling
1.	Teacher behavior: Prescribes certain actions. Example: "That s not allowed here."	.53	4
2.	Teacher behavior: Discourages pupil expression of feeling. Example: "Don't bring your personal experiences into the discussion."	~ ,65	
3.	Teacher behavior: Student behavior is condemned. Example: "That is absolutely awful."	· · · · · · · · · · · · · · · · · · ·	•
4.	Teacher behavior: Rejects student planning. Example: "I don't want to do that this term."	78 ,	
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9.	Teacher behavior: Persists in advocating an idea in the face of contrary evidence. Example: "Despite the I still think I'm right."	at, .82	
10,	Teacher behavior: Complains. Example: "That's not fair."		
11.	Teacher behavior: Indicates that what the pupil has said is incorrect. Example: "That's not right."	.78	
12.	Teacher behavior: Discourages pupil ideas. Example: "I don't think we ought to pursue that."	.77	
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APPENDIX A

INDEX OF TEACHER'S AFFECTIVE COMMUNICATION: FOURTEEN-ITEM SHORT FORM

Instructor being evaluated	• , .			•	/.	
The results of this questionaire provide data in evaluating teaching. Please try to be as honest and precise as possible. These evaluations are to be anonymous, SO PLEASE DO NOT SIGN YOUR NAME. Mark all answers on the questionnaire itself. Sample item	4	:	·		/-	$\overline{}$
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۷,	Teacher behavior: Discourages pupil expression	
	For example: "Don't bring your personal experie	nces into
	the classroom discussion."	••
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	Sounds very	Sounds very
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	my teacher	my teacher
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3.	, Teacher behavior: Student behavior is condemned	. For example;
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4.	Teacher behavior: Rejects student planning. For	example: "I
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.6.	Teacher behavior: Answers "no" to a direct requ	est. For example
	"No, you can't do that."	•
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	Sounds very	Sounds very
	much unlike	much like`
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7.	Teacher behavior: Reads another's remark as a d	erogatory
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11.	Teacher behavior:	Indicates t	hat what the	oupil has said	is
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13.	Teacher behavior: of view. For exam				point
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14.	Teacher behavior:	name-calls.	For example:	"Dummy!"	= = = = = = = = = = = = = = = = = = = =
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